

Remarks

Claims 5-18 and 20-25 are pending in the present application. MPEP 706.07(e) states that “The examiner may withdraw the rejection of finally rejected claims. If new facts or reasons are presented such as to convince the examiner that the previously rejected claims are in fact allowable or patentable in the case of reexamination, then the final rejection should be withdrawn.” Applicants therefore respectfully request entry and consideration of the following new remarks.

Claim rejections under 35 U.S.C. § 103

The Office Action rejects claims 9-13 and 22-24 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984).

The Office Action states that Tanaami discloses a reaction vessel wherein the bottom walls and sidewalls form a straight tubular chamber for receiving a liquid and for interacting with a pipetting tip. The Office Action refers to paragraphs [0026]-[0029] in Tanaami. Applicants respectfully disagree for the following three reasons.

Firstly, as acknowledged by the Examiner, paragraphs [0026]-[0029] do not disclose interaction of a pipetting tip with a tubular chamber as instantly claimed in claim 9. In fact, paragraphs [0026]-[0029] teach that a needle is inserted through a rubber plug into holding part (14). A needle is not and cannot be assimilated to a pipetting tip. A pipetting tip is defined as: “a small piece of apparatus which typically consists of a narrow tube into which fluid is drawn by suction (as for dispensing or measurement) and retained by closing the upper end” (see Merriam-Webster online dictionary). Pipetting tips are usually made of glass or plastic material. A needle is defined as “a slender hollow instrument for introducing material into or removing material from the body parenterally” (see Merriam-Webster online dictionary). Because of its structure, material and function, a pipetting tip cannot pierce a rubber plug and therefore could not be inserted through the rubber plug of the device disclosed in Tanaami. Pipetting operations are not possible with the device disclosed in Tanaami. Therefore, the device disclosed in Tanaami does not comprise a straight tubular chamber adapted for receiving a pipetting tip introduced into the reaction vessel through said upper opening.

Secondly, the device disclosed in Tanaami comprises a pre-processing part (15) blocking the passage to the processing chamber. The presence to pre-processing part (15) does not allow pipetting operations in the processing chamber. This is another reason for which the device disclosed in Tanaami does not comprise a straight tubular chamber

adapted for receiving a pipetting tip introduced into the reaction vessel through said upper opening.

Thirdly, paragraphs [0026]-[0029] teach that the region comprising the holding part (14), pre-processing part (15) and processing chamber (blood vessel (12)) is under negative pressure and maintained air-tight with the rubber plug. When the needle is inserted through the rubber plug, blood collected is aspirated through the pre-processing part (15) into the processing chamber. Pipetting operations are not commonly done under negative pressure. At least it is to be pointed out that this is another evidence that the device disclosed in Tanaami is not designed for pipetting operations. Insertion of a pipetting tip through the rubber plug is not possible because a pipetting tip is not designed for piercing a rubber plug. Furthermore, removal of the rubber plug and of the pre-processing part to insert a pipetting tip is not possible without drastic changes in the principle of operation of the device disclosed in Tanaami.

In fact, as explained above, the device disclosed in Tanaami was not designed to allow pipetting operations into the processing chamber and is not suitable for this purpose.

The Office Action states that the person skilled in the art would have been motivated to modify the device of Tanaami with the teaching of Lehmann to allow pipetting operations. However, it should be noted that Lehmann's device neither teaches nor allows pipetting operations either. Its principle of operation relies on a thin layer of sample solution in the processing chamber to provide a liquid-tight connection. This requires a thin processing chamber. Referring to paragraph [0024] and figure 5, the processing chamber (33) is shown to be as wide as chip (21) which has a thickness of about 0.7 millimeter. Further, opening (13) appears to be even smaller so that its diameter does not allow introduction of a pipetting tip and therefore pipetting operations either.

Thus, the combination of Tanaami and Lehmann does not provide any teaching for the person skilled in the art to arrive to the invention.

Also, modifying the device disclosed in Tanaami to allow pipetting operations would completely change the principle of operation of said device. The device disclosed in Tanaami requires an environment under negative pressure that remains air-tight with a rubber plug. Pipetting operations in the processing chamber would require removal of the rubber plug which imply removal of the mandatory negative pressure applied inside the device and disruption of the pre-processing chamber. Thus, removal of the rubber plug to allow insertion of a pipetting tip into the processing chamber for pipetting operations would mean removal of the negative pressure necessary to the principle of operation of said device. Also, a pre-processing part (15) would have to be removed (possibly destroying the device) to allow passage of a pipetting tip to reach the processing chamber.

These modifications would not only completely change the principle of operation of the device disclosed in Tanaami, but would also render it unsuitable for its intended purpose. The device disclosed in Tanaami would not work without negative pressure and without a pre-processing chamber. MPEP 2143.02.VI. states that “if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*”. And MPEP 2143.02.V states that “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.

This also responds to the Examiner’s statement on pages 10 and 11 of the Office Action that the person skilled in the art would have substituted the fluid introduction system disclosed in Tanaami with the fluid introduction system of Lehmann. Such substitution would not be possible without completely altering the principle of operation and without rendering said device unsuitable for its intended purpose.

Thus, the person skilled in the art would not have been motivated to modify the device disclosed in Tanaami to enable pipetting operations, because this would require a complete redesign in structure and functions, which would drastically alter its original principle of operation and would render it unsuitable for its intended purpose.

The Office Action concedes that the vessel of the invention also differs from the device disclosed in Tanaami for the reason, the chip shaped carrier is located in an opening of a side wall of said tubular body or in a recess formed in the inner surface of said side wall. The benefits of this special arrangement are described on page 5, line 35 to page 6, line 5 of the patent application as filed:

“This particular location of the chip shaped carrier is advantageous because it allows removing entirely any liquid contained in reaction vessel by a simple pipetting operation during which a pipetting tip is inserted into the vessel until it practically touches the bottom of the vessel. Since the chip shaped carrier and the active surface thereof are not at all in the travel path of the pipetting tip this tip cannot cause any damage of the active surface of the chip shaped carrier.”

Clearly, Tanaami neither teaches nor suggests such a feature and its associated benefits.

Further, none of the other prior art of records teaches the benefits of the invention in view of the specific location of the chip in the processing chamber.

Claims 10-18 and 20-25 depend on claim 9 and incorporate all its limitations. The arguments presented above with respect to claim 9 hence also apply to claims 10-18 and 20-28.

In view of the above, reconsideration and withdrawal of the rejection to claims 9-13 and 22-24 under 35 U.S.C. § 103(a) over Tanaami in view of Lehmann is respectfully requested.

The Office Action also rejects claim 5 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984) and Larry (US 4845025).

Claim 5 has common limitations with claim 9 and therefore, the arguments presented above with regard to claim 9 over Tanaami in view of Lehmann also apply to claim 5.

The Office Action states that Larry teaches mixing along a predetermined elliptical trajectory. However, Larry does not provide any teaching allowing the person skilled in the art to modify the device disclosed in Tanaami to arrive to the invention in an obvious manner. As explained above, modifying the device disclosed in Tanaami to allow pipetting operations in the processing chamber would completely alter its principle of operation by suppressing the mandatory negative pressure and air-tight environment. Also, pipetting operations in the processing chamber would require removal of the pre-processing part and render the device disclosed in Tanaami unsuitable for its intended purpose. MPEP 2143.02.V and MPEP 2143.02.VI. make it clear that the invention cannot be seen as obvious in view of these facts.

Reconsideration and withdrawal of the rejection to claim 5 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984) and Larry (US 4845025) is therefore respectfully requested.

The Office Action also rejects claims 6-8 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984), Larry (US 4845025) and further Frackleton (US 5133937).

Claims 6-8 depend on claim 5 and incorporate all its limitations. The arguments presented above with respect to claim 5 over Tanaami in view of Lehmann and Larry hence also apply to claims 6-8.

The Office Action states that Frackleton teaches a reaction vessel coupled to a vessel holder that comprises various heat transfer elements. However, Frackleton does not provide any useful teaching allowing the person skilled in the art to modify the device disclosed in Tanaami to arrive to the invention in an obvious manner. As explained above,

modifying the device disclosed in Tanaami to allow pipetting operations in the processing chamber would completely alter its principle of operation by suppressing the mandatory negative pressure and air-tight environment. Also, pipetting operations in the processing chamber would require removal of the pre-processing part and render the device disclosed in Tanaami unsuitable for its intended purpose. MPEP 2143.02.V and MPEP 2143.02.VI. make it clear that the invention cannot be seen as obvious in view of these facts.

Reconsideration and withdrawal of the rejection to claims 6-8 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984), Larry (US 4845025) and Frackleton (US 5133937) is therefore respectfully requested.

The Office Action also rejects claims 14-16 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984), Larry (US 4845025) and further Frackleton (US 5133937).

Claims 14-16 depend on claim 9 and incorporate all its limitations. The arguments presented above with respect to claim 9 over Tanaami in view of Lehmann also apply to claims 14-16.

As explained above, neither Larry nor Frackleton would allow the person skilled in the art to arrive to the invention in an obvious manner. In fact, none of these documents provide teaching that would allow modification of the device disclosed in Tanaami to arrive to the invention. Further, as explained above, modifying the device disclosed in Tanaami as stated in the Office Action would not be possible without altering its principle of operation and without rendering it unsuitable for its intended purpose.

Reconsideration and withdrawal of the rejection to claims 14-16 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984), Larry (US 4845025) and Frackleton (US 5133937) is therefore respectfully requested.

The Office Action also rejects claim 25 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984) as applied to claim 9 and further in view of Mochida (GB 2129551).

Claim 25 depends on claim 9 and incorporate all its limitations. The arguments presented above with respect to claim 9 over Tanaami in view of Lehmann also apply to claim 25.

The Office Action states that Mochida teaches a vessel with barcode labels. However, Mochida does not provide any useful teaching allowing the person skilled in the art to modify the device disclosed in Tanaami to arrive to the invention in an obvious manner. As explained above, modifying the device disclosed in Tanaami to allow pipetting

operations in the processing chamber would completely alter its principle of operation by suppressing the mandatory negative pressure and air-tight environment. Also, pipetting operations in the processing chamber would require removal of the pre-processing part and render the device disclosed in Tanaami unsuitable for its intended purpose. MPEP 2143.02.V and MPEP 2143.02.VI. make it clear that the invention cannot be seen as obvious in view of these facts.

Reconsideration and withdrawal of the rejection to claim 25 under 35 U.S.C. § 103(a) over Tanaami (US 20010016321) in view of Lehmann (EP 1161984) as applied to claim 9 and further in view of Mochida (GB 2129551) is therefore respectfully requested.

Conclusion

It is respectfully submitted that the pending claims are in condition for allowance. Applicants therefore respectfully request withdrawal of the finality of the Final Office Action. No fee is believed to be due at this time, however, the Commissioner is authorized to charge any fee deficiency, or credit any overpayment, to Deposit Account No. 50-0812.

If the Examiner believes a telephone conference would expedite prosecution of this application, he may telephone the undersigned directly at 925-730-8565.

Respectfully submitted,

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